



# Mercury Control Technology R&D Program Review Meeting



**AUGUST 12-13, 2003**

## AGENDA

### Tuesday, August 12

- 7:00 – 8:00 am     **Registration and Continental Breakfast**
- 8:00 – 8:10 am     **Introduction**  
*Thomas J. Feeley, III*, Product Manager, Innovations for Existing Plants  
U.S. Department of Energy, National Energy Technology Laboratory
- 8:10 – 8:30 am     **Welcome**  
*Carl O. Bauer*, Associate Director, Office of Coal and Environmental Systems  
U.S. Department of Energy, National Energy Technology Laboratory
- 8:30 – 8:50 am     Overview of DOE-NETL's Mercury R&D Program  
*Scott A. Renninger*, Project Manager, Environmental Projects Division  
U.S. Department of Energy, National Energy Technology Laboratory
- 8:50 – 9:20 am     Overview of EPRI's Mercury R&D Program  
*George R. Offen*, Manager Air Emissions and Byproducts  
EPRI
- 9:20 – 9:50 am     Overview of EPA's Mercury R&D Program  
*James D. Kilgroe*, Manager, Municipal Waste Combustion  
U.S. Environmental Protection Agency
- 9:50 – 10:20 am   **Break**



### **Mercury Control Technology R&D** - Moderator - *Scott A. Renninger* - U.S. Department of Energy, National Energy Technology Laboratory

- 10:20 – 10:50 am   Field Test Program to Develop Comprehensive Design, Operating and Cost Data for Mercury Control  
*Michael D. Durham*  
ADA Environmental Solutions LLC
- 10:50 – 11:20 am   Full-Scale Testing of Enhanced Mercury Control Technologies for Wet FGD Systems  
*George A. Farthing*  
McDermott Technology Inc.
- 11:20 – 12:10 pm   Long-term Operation of a COHPAC System for Removing Mercury from Coal-Fired Flue Gas  
*C. Jean Bustard*  
ADA Environmental Solutions LLC
- 12:10 – 1:10 pm     **Group Lunch**
- 1:10 – 1:40 pm     Mercury Control with the Advanced Hybrid Particulate Collector  
*Stanley J. Miller*  
Energy & Environmental Research Center
- 1:40 – 2:10 pm     Mercury Removal in a Non-Thermal Plasma Based Multi-Pollutant Control Technology for Utility Boilers  
*Christopher R. McLarnon*  
Powerspan Corp.

## ***Tuesday, August 12 (continued)***

- 2:10 – 2:40 pm Pilot Testing of Oxidation Catalysts for Enhanced Mercury Control by Wet FGD Systems  
*Gary M. Blythe*  
URS Corporation
- 2:40 – 3:10 pm **Break**
- 3:10 – 3:40 pm The CONSOL/Allegheny Pilot Plant Study of Low-Temperature Mercury Capture with an Electrostatic Precipitator  
*Richard A. Winschel*  
CONSOL Energy Inc.
- 3:40 – 4:10 pm Pilot-Scale Research at NETL on Mercury Measurement and Control  
*Andrew Karash*  
U.S. Department of Energy, National Energy Technology Laboratory
- 4:10 – 4:40 pm Novel Techniques for Mercury Control  
*Evan J. Granite and Henry W. Pennline*  
U.S. Department of Energy, National Energy Technology Laboratory
- 5:00 – 6:30 pm **Poster Session and Light Refreshments**

## ***Wednesday, August 13***

***Mercury Control Technology R&D (continued)*** - Moderator - Evan J. Granite - U.S. Department of Energy, National Energy Technology Laboratory

- 7:00 – 8:00 am **Registration and Continental Breakfast**
- 8:00 – 8:30 am Assessment of Low-Cost Novel Sorbents for Coal Fired Power Plant Mercury Control  
*Trevor Ley*  
Apogee Scientific, Inc.
- 8:30 – 9:00 am Mercury Control with Calcium-Based Sorbents and Oxidizing Agents  
*Thomas K. Gale*  
Southern Research Institute
- 9:00 – 9:30 am Preliminary Field Evaluation of Mercury Control Using Combustion Modifications  
*Vitali Lissianski*  
GE Energy & Environmental Research Corp.
- 9:30 – 10:00 am Oxidation of Mercury Across SCR Catalysts in Coal-Fired Power Plants Burning Low-Rank Fuels  
*Constance Senior*  
Reaction Engineering International
- 10:00 – 10:30 am **Break**
- 10:30 – 11:00 am Mercury Control Technologies for Electric Utilities Burning Lignite Coals  
*John H. Pavlish*  
Energy & Environmental Research Center
- 11:00 – 11:30 am Evaluation of Mercury Emissions from Coal-Fired Facilities with SCR-FGD Systems  
*Shiaw C. Tseng*  
CONSOL Energy R&D
- 11:30 – 12:00 pm Evaluation of Mercury Speciation at Power Plants Using SCRs for NO<sub>x</sub> Control  
*Dennis L. Laudal*  
Energy & Environmental Research Center
- 12:00 – 1:00 pm **Group Lunch**
- 1:00 – 1:30 pm Speciation and Attenuation of Arsenic and Selenium, and Fate of Mercury in Coal Combustion Products  
*Ken Ladwig*  
EPRI
- 1:30 – 2:00 pm Direct Measurement of Mercury in Power Plant Plumes  
*Leonard Levin*  
EPRI

## ***Wednesday, August 13, (continued)***

***Byproduct Characterization*** - Moderator - Lynn A. Brickett - U.S. Department of Energy,  
National Energy Technology Laboratory

2:00 – 2:30 pm      The Evolution of Mercury from Coal Combustion Materials and By-Products  
*Allyson M. Schwalb*  
CONSOL Energy Inc.

2:30 – 2:45 pm      **Break**

2:45 – 3:15 pm      NETL's Coal By-Product Characterization Research  
*Ann G. Kim*  
U.S. Department of Energy, National Energy Technology Laboratory

3:15 – 3:45 pm      Mercury Impacts on By-Products  
*Debra F. Pflughoeft-Hassett*  
Energy & Environmental Research Center

3:45 – 4:15 pm      **Wrap-up**  
*Thomas J. Feeley, III*  
U.S. Department of Energy, National Energy Technology Laboratory

4:15 pm              **Adjourn**



*Hyatt Regency - Pittsburgh  
International Airport*

## ***Poster Presenters***

Evaluation of the Emission, Transport, and Deposition of Mercury from Coal Based Power Plants in the Ohio River Valley Region — *Kevin Crist*, Ohio University

Mercury Deposition Monitoring at the Holbrook Site, Greene County, PA — *Robinson P. Khosah*, Advanced Technology Systems, Inc.

Assessing the Mercury Health Risks Associated with Coal-Fired Power Plants: Impacts of Local Deposition — *Terry Sullivan*, Brookhaven National Laboratory

Critical Review of Mercury Chemistry — *C. David Livengood and Marshall H. Mendelsohn*, Argonne National Laboratory

Computational Approaches to the Development of Advanced Mercury Control Technologies — *Jens I. Madsen*, Fluent Inc.

Fate of Oxidized Mercury in Biologically Regenerated NO<sub>x</sub> Scrubber Liquor — *Richard W. Hammack*, U.S. Department of Energy, National Energy Technology Laboratory

ElectroCore Testing at Gaston — *Bruce Easom*, LSR Technologies

"Longer-Term" Mercury Emission Variability — *Dennis L. Laudal*, Energy & Environmental Research Center

Processing and Reuse of Activated Carbon Used to Adsorb Mercury from Power Plant Flue Gases — *Thomas Weyand*, Pittsburgh Mineral and Environmental Technology

Injecting Gas Oxidants to Oxidize Elemental Mercury for the Control of Its Emission from Coal Power Plants — *Ted Chang*, Lawrence Berkeley National Laboratory